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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,511	04/06/2005	James R. Howarth	HOW1.005-US	5770
3775 7590 11/12/2009 ELMAN TECHNOLOGY LAW, P.C. P. O. BOX 209 SWARTHMORE, PA 19081				
EXAMINER				
MERCEDES, DISMERY E				
ART UNIT		PAPER NUMBER		
2627				
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11/12/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/530,511

**Applicant(s)**

HOWARTH ET AL.

**Examiner**

DISMERY E. MERCEDES

**Art Unit**

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 August 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 30, 31, 33, 36, 41-43, 45-48 and 51-53 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 30, 31, 33, 36, 41-43, 45, 47, 48, 51 and 52 is/are rejected.
- 7) ☒ Claim(s) 46 and 53 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 April 2005 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

Examiner notes that although the allowable subject matter as indicated in the previous office action was included in Claims 41 and 45, Applicants failed to put the claim in condition for allowance, because of the 112 issues. Similar rejection under 112, were indicated by the Examiner in the last office action, and although these were fixed in Claim 30, they were introduced in Claims 41 and 45. Applicants did not take this into consideration, and as a result the claims are rejected.

#### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 30-36, 41-43, 45-48, 51-53 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Rejection applies to any subsequent dependent claim.

In Claim 30, the limitation "integrating the speed variation function to obtain a time delay corresponding to at least one sample of point; wherein if a time delay exists....and if a time delay does not exist..." it is a bit contradictory, since it seems that a time delays has already applied to the sample point, so that there will always be a time delay, which is the purpose of the integrator "integrating...to obtain a time delay". So, it is not clear what the applicant is trying to convey in this limitation, if a time delay is obtained then a time delay exist, when would a time delay not exist?

In Claims 41 and 45, the limitation "...wherein such adjusting comprises establishing a limit in a change in a period of the reference signal, *and if* the change in the period exceeds the limit..." there is conditional language to which only applies for one condition, what happens if the change in

the period does not exceed the limit? For purposes of examination, because this limitation contains conditional language pertaining to only one situation, the Examiner will only give partial weight to the added limitation.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 41-43, 45-48, 51-52 are rejected under 35 U.S.C. 102(b) as being anticipated by Winslow et al. (US 4,353,089).

As to Claim 41, Winslow et al. et al. discloses a method of providing an improved audio reproduction derived from an analog recording, the method comprising:  
providing a digitized wideband playback signal derived from a recording containing wow/flutter (col.2, lines 21-24); deriving, without use of a prescribed tone or code intended to be indicative of timing, a reference signal from the digitized wideband playback signal, the reference signal being synchronized with the wideband playback signal (col.2, lines 24-28); generating a modulated carrier by stabilizing and idealizing the reference signal (col.2, lines 40-50); deducing periodic deviations between the modulated carrier and a high-precision clock signal (col.4, lines 40-61 and col.8, lines 2-8); and adjusting timing and pitch in the digitized wideband playback signal in response to the deduced periodic deviations, wherein such adjusting comprises establishing a limit in a change in a period of the reference signal (col.4, lines 45-50; col.6, lines 45-52; col.7, lines 25-34) thereby

producing a wideband playback signal substantially corrected for distortion corresponding to said wow/flutter (col.7, lines 33-60; col.8, lines 5-12).

As to Claim 42, Winslow et al. further discloses wherein the reference signal is generated by identifying a reference sound entity which can be derived from the wideband analog playback signal (col.4, line 10-15; 64-66); and wherein the modulated carrier is generated from a known or preestablished pattern within the reference sound element (col.4, lines 10-15 and 29-40).

As to Claim 43, Winslow et al. further discloses: determining a set of data reflecting the instantaneous deviation between a nominal intermediate frequency and the reference signal; and generating a modulated carrier that reflects the deviations so determined (col.4, lines 44-60).

As to Claim 51, Winslow et al. further discloses readable storage medium containing data representing digital audio information which has been generated by the method of claim 41 (col.4, lines 5-7; 63-67).

As to Claim 52, Winslow et al. further discloses wherein the medium is an optical disk, a memory card, or a digital audio tape cassette (col.2, lines 38-42).

As to Claims 45,47-48, has similar limitations as to those treated in the rejections of Claims 41-43, and are met by the references as discussed above. Claim 45, however, recites reference signal corresponding to a bias signal from either the analog playback signal or digitized wideband playback signal, which is met by Winslow (as depicted in fig.3, the reference signal is generated from reference local oscillator 33).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 30, 33-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over De Mey et al. (US 6,603,820) in view of Takeuchi et al. (US 5,432,296).

As to Claim 30, De Mey et al. discloses receiving an input waveform including a frequency modulated carrier waveform and frequency modulated carrier frequency, said input waveform comprising sample points (figs.2-3 and col.3, lines 14-16); demodulating the frequency modulated carrier waveform to obtain a speed variation function (fig.2, demodulation channel 6 and col.2, lines 25-27); integrating the speed variation function to obtain a time delay corresponding to at least one sample point of the input waveform (fig.2, delay line 9 and integrator 13 and col.3, lines 26-38).

De Mey et al. fails to specifically disclose wherein if a time delay exists, the sample point is irregular and if a time delay does not exist, the sample point is regular; interpolating between irregular sample points of the input waveform, and not interpolating between regular sample points of the input waveform, thereby establishing a set of output sample points at a regular interval. However, Takeuchi et al. discloses an apparatus wherein an interpolator is used to interpolate sample points when a delay amount has changed (see fig.13 and col.37-54). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the circuit of De Mey et al. by implementing an interpolator as disclosed by Takeuchi et al., the motivation being to avoid discontinuity of the waveform (col.13, lines 30-32 of Takeuchi et al.).

As to Claim 33, De Mey et al. further discloses demodulating the frequency modulated carrier waveform to obtain a speed variation function, said demodulation performed using hardware (as depicted in figs.2-3).

As to Claim 34, De Mey et al. further discloses demodulating the frequency modulated carrier waveform to obtain a speed variation function, said demodulation performed using software (as depicted in figs.2-3, demodulation channel).

As to Claim 35, De Mey et al. further disclose providing lowpass filtration of an output of the speed variation function (fig.2, integrator 13, which provides low pass filtration of the signal).

As to Claim 36, has limitations similar to those treated in claim 30, and are met by the references as discussed above.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over De Mey et al. in view of Takeuchi et al, as applied to Claim 30, and further in view of Wilkinson (US 5,218,486).

As to Claim 31, De Mey et al. in view of Takeuchi fails to disclose providing bandpass filtration for the frequency modulated carrier waveform. However, Wilkinson discloses an arrangement to remove drift and flutter wherein the received reference signal is bandpass filtered (col.2, lines 65-68; col.5, lines 34-36). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the system of De Mey et al. in view of Takeuchi by implementing bandpass filter in the received signal as disclosed by Wilkinson, the

motivation being to minimize the effects of fading and dropouts and increase the signal to noise ratio in the output (col.2, lines 67-68; col.5, lines 35-36 of Wilkinson).

***Allowable Subject Matter***

3. Claims 53 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
4. Claim 46 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.
5. Claims 41 and 45 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.



Any inquiry concerning this communication or earlier communications from the examiner should be directed to DISMERY E. MERCEDES whose telephone number is (571)272-7558. The examiner can normally be reached on Monday - Friday, from 9:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Thi Nguyen can be reached on 571-272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dismery E. Mercedes/  
Primary Examiner, Art Unit 2627